UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

### NOTICE OF ALLOWANCE AND FEE(S) DUE

7590 04/13/2009

Vesuvius 4604 Campbells Run Road Pittsburgh, PA 15205 EXAMINER

KASTLER, SCOTT R

ART UNIT PAPER NUMBER

1793

DATE MAILED: 04/13/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,858	05/17/2006	Johan L. Richaud	1463 US/PCT	8092

TITLE OF INVENTION: MULTI-OUTLET CASTING NOZZLE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	07/13/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

#### HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

#### PART B - FEE(S) TRANSMITTAL

#### Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE

Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where

maintenance fee notificat	tions.		orders and notification of (a) specifying a new com					
CURRENT CORRESPONDI	Fo pa	Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, mushave its own certificate of mailing or transmission.						
	7590 04/13	/2009		Cer	tificate	e of Mailing or Transn	nission	
Vesuvius			Ţ	hereby certify that th	is Fee(	s) Transmittal is being	deposited with the United	
4604 Campbells			Si	ates Postal Service w Idressed to the Mail	vith sui   Stop	fficient postage for first ISSUE FEE address a	deposited with the United class mail in an envelope above, or being facsimile te indicated below.	
Pittsburgh, PA 1	5205		tr	ansmitted to the USP	TO (57	71) 273-2885, on the da	te indicated below.	
							(Depositor's name)	
			_				(Signature)	
			L				(Date)	
APPLICATION NO.	FILING DATE		FIRST NAMED INVEN		NTOR ATTORNEY DOCKET NO.		CONFIRMATION NO.	
10/579,858	05/17/2006	•	Johan L. Richaud			1463 US/PCT	8092	
TITLE OF INVENTION	: MULTI-OUTLET CA	STING NOZZLE						
APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DU	E PREV. PAID ISSUI	E FEE	TOTAL FEE(S) DUE	DATE DUE	
nonprovisional	NO	\$1510	\$300	\$0		\$1810	07/13/2009	
EXAM	INER	ART UNIT	CLASS-SUBCLASS	7				
KASTLER,	SCOTT R	1793	222-606000	_				
1. Change of corresponde	ence address or indication	n of "Fee Address" (37	2. For printing on the	patent front page, lis	st		_	
CFR 1.363).  Change of correspond	ondence address (or Cha	inge of Correspondence	(1) the names of up or agents OR, alterna	to 3 registered paten	ıt attorı	neys 1		
☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.			(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to					
PTO/SB/47; Rev 03-0 Number is required.	ication (or "Fee Address") 2 or more recent) attach	" Indication form ned. Use of a Customer						
3. ASSIGNEE NAME A	ND RESIDENCE DATA	A TO BE PRINTED O	N THE PATENT (print or	ype)				
PLEASE NOTE: Unl	ess an assignee is ident h in 37 CFR 3.11. Com	ified below, no assign-	ee data will appear on the NOT a substitute for filing a	patent. If an assign	ee is io	dentified below, the do	cument has been filed for	
(A) NAME OF ASSIC	•		(B) RESIDENCE: (CI	· ·	COUNT	ΓRΥ)		
Please check the appropri	iate assignee category or	categories (will not be	printed on the patent):	☐ Individual ☐ Co	orporat	ion or other private grou	p entity Government	
4a. The following fee(s)	ara submittadi		4b Dayment of Fee(s). (D)	eace first reapply or		viously noid issue for s	haven abava)	
4a. The following fee(s) a	are submitted.		4b. Payment of Fee(s): ( <b>Please first reapply any previously paid issue fee shown above</b> )  A check is enclosed.					
<u> </u>	To small entity discount p	permitted)	Payment by credit card. Form PTO-2038 is attached.					
Advance Order - #	# of Copies	The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number (enclose an extra copy of this form).						
5. Change in Entity Stat	tus (from status indicated	d above)		·				
••	s SMALL ENTITY statt			-		TITY status. See 37 CF.		
NOTE: The Issue Fee and interest as shown by the I	d Publication Fee (if requecords of the United Sta	uired) will not be accep ites Patent and Tradema	oted from anyone other that ark Office.	n the applicant; a regi	stered	attorney or agent; or the	assignee or other party in	
Authorized Signature		Date						
Typed or printed name				Registration N	lo			
This collection of inform	ation is required by 37.0	FR 1 311 The informa	ation is required to obtain o	r retain a benefit by t	he nub	lic which is to file (and	by the USPTO to process)	
an application. Confident submitting the completed this form and/or suggesti	tiality is governed by 35 dapplication form to the ons for reducing this but	U.S.C. 122 and 37 CF USPTO. Time will varden, should be sent to	FR 1.14. This collection is cary depending upon the inc the Chief Information Off	estimated to take 12 r lividual case. Any co icer, U.S. Patent and	minute: ommen Trader	s to complete, including ts on the amount of tim mark Office, U.S. Depar	gathering, preparing, and e you require to complete tment of Commerce, P.O.	

Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450

P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/579,858	05/17/2006	Johan L. Richaud	1463 US/PCT	8092	
75	90 04/13/2009		EXAMINER		
Vesuvius			KASTLER, SCOTT R		
4604 Campbells R			ART UNIT	PAPER NUMBER	
Pittsburgh, PA 152	05		1793		
		DATE MAILED: 04/13/2009			

# Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 324 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 324 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

	Application No.	Applicant(s)	
	10/579,858	RICHAUD ET AL.	
Notice of Allowability	Examiner	Art Unit	
	Soott Kootlor	1702	
	Scott Kastler	1793	
The MAILING DATE of this communication apperature All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT R of the Office or upon petition by the applicant. See 37 CFR 1.313	(OR REMAINS) CLOSED or other appropriate comi IGHTS. This application is	in this application. If not included nunication will be mailed in due course.	<b>THIS</b> initiative
1. $\boxtimes$ This communication is responsive to <u>the amendment and</u>	affidavit under R 1.132 file	<u>d on 3/3/2009</u> .	
2. The allowed claim(s) is/are <u>28,29,31-42 and 44-54</u> .			
<ul> <li>3. ☐ Acknowledgment is made of a claim for foreign priority units.</li> <li>a) ☐ All b) ☐ Some* c) ☐ None of the:</li> <li>1. ☐ Certified copies of the priority documents have</li> <li>2. ☐ Certified copies of the priority documents have</li> </ul>	e been received.	, , , ,	
3. Copies of the certified copies of the priority do	cuments have been receiv	ed in this national stage application from	n the
International Bureau (PCT Rule 17.2(a)).			
* Certified copies not received:			
Applicant has THREE MONTHS FROM THE "MAILING DATE" noted below. Failure to timely comply will result in ABANDONN THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.		le a reply complying with the requiremen	nts
4. A SUBSTITUTE OATH OR DECLARATION must be subminformal PATENT APPLICATION (PTO-152) which give			OF
5. CORRECTED DRAWINGS ( as "replacement sheets") must	st be submitted.		
(a) I including changes required by the Notice of Draftspers	son's Patent Drawing Revi	ew ( PTO-948) attached	
1) 🗌 hereto or 2) 🔲 to Paper No./Mail Date			
<ul><li>(b) ☐ including changes required by the attached Examiner'</li><li>Paper No./Mail Date</li></ul>	s Amendment / Comment	or in the Office action of	
Identifying indicia such as the application number (see 37 CFR 1 each sheet. Replacement sheet(s) should be labeled as such in t			f
6. DEPOSIT OF and/or INFORMATION about the deposit attached Examiner's comment regarding REQUIREMENT			
Attachment(s) 1. ☐ Notice of References Cited (PTO-892)	5. ☐ Notice of	Informal Patent Application	
2. $\square$ Notice of Draftperson's Patent Drawing Review (PTO-948)		Summary (PTO-413),	
3. Information Disclosure Statements (PTO/SB/08),	Paper N 7.	o./Mail Date 's Amendment/Comment	
Paper No./Mail Date  4.  Examiner's Comment Regarding Requirement for Deposit	8. 🛛 Examiner	s Statement of Reasons for Allowance	
of Biological Material	9.	<u></u> ·	
/Scott Kastler/			
Primary Examiner, Art Unit 1793			

#### **DETAILED ACTION**

### Allowable Subject Matter

Claims 28, 29, 31-42 and 44-54 are allowed.

### Response to Amendment

The Affidavit under 37 CFR 1.132 filed on 3/3/2009 is sufficient to overcome the rejection of claims 28, 29, 31-42 and 44-54 based upon either of Saito et al or EP'166 at least because as shown in the affidavit, in the comparative examples as described in sections 20-33 particularly and 14-33 in general, the configurations covered by the present claims impart improved flow velocities on the molten metal being dispensed by the nozzle.

#### Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Kastler whose telephone number is (571) 272-1243. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number: 10/579,858 Page 3

Art Unit: 1793

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <a href="http://pair-direct.uspto.gov">http://pair-direct.uspto.gov</a>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Scott Kastler/ Primary Examiner, Art Unit 1793

sk